

GLEON DOC Questions Group (Ami Nishri, Evelyn Gaiser, Susan Hendricks, Kevin Rose, Craig Williamson):

Interests of investigators in group:

Ami - How DOC influences nutrient supply?

Evelyn – ENSO events that alter DOC and influence Lake Annie color, lake metabolism. Interested in looking at legacy of these events and impact on phytoplankton, nutrient versus light limitation and implications for phytoplankton community structure. Monitor depth of penetration of PAR. Link this to heterogeneity of oxygen profiles – for example metalimnetic maxima.

Susan – Kentucky reservoir (182 miles long) heavily influenced by terrestrial changes, also interested in long-term change. What is cause of seasonal clear-water phase?

Craig & Kevin – DOC dynamics in response to climate change and effects on UV and PAR transparency, use of UV:PAR ratios to develop optical indices of DOC quantity and quality.

DOC questions for GLEON:

(1) How are C sources changing in different parts of the world?

(2) How does lake metabolism respond to different C sources?

For both (1) and (2):

- allochthonous vs. autochthonous
- primary productivity versus DOC
- mixing depth
- oxygen profiles
- transparency (PAR limitation and UV:PAR as diagnostic)
- DOC-specific absorbance?
- influence of pH (sulfate deposition and environmental controls)?
- Headwater Lake Annie versus flow-through Kentucky Lake, and alpine lake?